

An aerial photograph of a river and surrounding landscape. The river is dark and flows from the bottom left towards the right. The surrounding land is a mix of green fields, brown patches, and some buildings. The overall tone is somewhat desaturated, with a lot of green and brown.

THE UNIVERSITY OF IOWA COLLEGE OF ENGINEERING

Volume 2001 Number 1

IOWA ENGINEER

Unraveling Ol' Man River

Letter from the Dean

As I assume the responsibility as Dean of the College of Engineering, I am reminded daily of how grateful we are for having the enormous talents of our students, faculty, and staff—coupled with the strong loyalty and mentorship of our many alumni and friends of the College. The University of Iowa College of Engineering is truly a special place, with unwavering dedication to fulfill our vision of being recognized internationally for engineering education and research, and for leadership to the profession.

One of my early tasks was to complete a five-year strategic plan for the College. After many months of development by faculty and staff, with key input also coming from many external constituencies, we have now completed a well-crafted blueprint for achieving our vision. In addition to deep soul searching and defining how the College should be shaped for future engineering education, we also face the task of focusing on tough resource decisions, based on the impact the strategic plan provides. (The full text of the College's strategic plan can be accessed on the Web at www.engineering.uiowa.edu/strategicplan.html.)

To me, the strategic plan puts in succinct words who we are and how we want to increase the level of greatness this College has already experienced. This is reflected in a series of strategic characteristics and aspirations contained in the plan that will enable the College to realize its vision:

- **Small-college atmosphere** that facilitates personal commitment to the educational success of students in a comprehensive university.
- Undergraduate curricula that emphasize **breadth and depth of education**, which link to areas contiguous to engineering.
- Graduate education that prepares students for **research and the advanced problem solving** needed to address complex engineering problems.
- **Internationally recognized research programs** in each department with strong support from professional constituencies.
- Demonstrable **leadership and service** in advancing engineering professionalism to meet society's needs.
- Educational and research **partnerships** with health sciences, business, and other University of Iowa colleges, and with select agencies, universities, and industries.
- Highly **successful alumni** who contribute to the profession in the global society.



P. BARRY BUTLER

Do we already have a solid foundation on which to further build these characteristics? Without question, we do. For example, as you read through this issue of *Iowa Engineer*, you will see numerous examples of how the College's strategic plan is already alive—whether it's the groundbreaking research that continues to evolve from IIHR-Hydrosience & Engineering (pages 6-9), the innovative approaches to leadership education at the Seamans Leadership Institute (pages 10-13), or how successful alumni, such as Barbara Sines, have made their mark on a profession guided by global trends (pages 18-19).

In many ways, the best measure of the success of our strategic plan is the achievement of our alumni. As Dean, I have a strong interest in getting to know our graduates much better—enabling them to give me valuable feedback and insight based on their success and extraordinary loyalty to the College. For example, within the first few weeks after being appointed Dean, I had the pleasure of visiting an alumnus who is vice president of one of the largest employee-owned engineering consulting firms in the U.S. Surprisingly, he shared over two hours of his valuable time, reflecting on fond memories of his days at Iowa, professional experiences, and keen advice on engineering education with me. I left his office better informed and guided by input I could not have received inside any classroom.

Every visit with alumni helps me develop a better appreciation of the College's history. Each visit also convinces me that the College's strategic plan is right on the mark. As I continue to travel throughout the United States and to many spots overseas, I sincerely look forward to meeting more alumni and friends of the College—sharing in our thoughts, memories, challenges, and all the passion that embodies "Engineering at Iowa." In particular, I hope to see many alumni Homecoming Weekend (September 28-29), as the College celebrates the official dedication of the Seamans Center for the Engineering Arts and Sciences. At long last, the College has a home where we can take education to new state-of-the-art levels. I hope you take time to be with us and share in this very special occasion.

P. Barry Butler
Dean

Shaping Student Leaders

The Seamans Leadership Institute (below) draws undergraduates from engineering and business to a weekend seminar in which they explore real-world challenges and meet key alumni leaders.

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On the cover:

The Mississippi River, near Muscatine, Iowa, in an infrared satellite image. Photo from the Upper Mississippi Research Center, LaCrosse, Wisconsin.

IOWA ENGINEER

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Hard Times: A Group Memoir

Mechanical engineering graduates from the class of 1930 kept up a correspondence that documents their early careers during the Great Depression.

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Unraveling Ol' Man River

A first-of-its-kind ecosystem research center prepares to study one of the world's great rivers as a whole—its ecology, geology, hydraulics, economics—all the interrelated systems that comprise the Mississippi.

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ace E. Nelson,
ni Secretary Class 1930,
Byron Street,
ago, Illinois.

Mr. Nelson:

I am sorry that I have been
er to you before now, but it seems the
set to write you something would happen
ut it off. I am very glad of this o
o to the members of the Class of 1930.
nber 1st you asked me numerous questio
perfectly willing to answer these que
not be news to the others.



Hard Times: A Group Memoir

by Jean Florman



Well, in making a lead
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dizing. The Company

Seventy years ago, a class of Iowa
engineers celebrated, graduated, applaud-
ed their parents and professors, and
looked forward to successful futures in
an honorable profession. Cutting-edge
radio technology and innovative
industrial design had made engineers
America's darlings, and for almost a
decade, the country had witnessed
unprecedented economic prosperity.

But members of the class of 1930
also felt the shadow of Black
Thursday—October 24, 1929.

There is no account of the full
burden of the Great Depression on
these young graduates. Yet a remark-
able series of documents written by
Iowa's 1930 mechanical engineering
alumni has preserved their thoughts
about their education, early careers,
and personal lives during the difficult
years immediately following gradua-
tion. Chatty, descriptive, funny, and
poignant in turn, these unique mem-
oirs are informative windows into the
past.

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I now hear Mr. McLarney of
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ac?

re is Mr. Hamil. Well, when
you are still in New Jersey
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Mechanical Engineering graduates
posed for a class photo in 1930.
Included in the photo is Professor
Croft (back row, second from left)
who suggested the young men keep
in touch through annual letters,
which were collected as "The
Mechanical's Bull-Session" (above)
and distributed to the whole class.

end, Allen. I imagine a little tough this
emen, I think

The story of "The Mechanical's Bull-Session," as the collected letters were titled, began with C.O. Croft, professor and head of mechanical engineering. Shortly before graduation, Croft proposed that the 10 members of the class of 1930 write annual letters summarizing what had happened in their lives during the previous year. One classmate, Wallace (Wally) E. Nelson, was chosen by his peers to print his classmates' typed "annual reports" onto blueprint paper, then bind and distribute the booklets to all who contributed. The project met with enthusiasm, and with various members of the class serving as editor, the booklets continued to be produced until at least 1938.

At first, the young engineers—like everyone else—didn't realize how devastating the stock market crash would be. After all, the "late depression," as alumnus C.H. Clark called it, became the Great Depression only in hindsight. Although all of the young engineers managed to find work or enter graduate school, their first letters, written in December 1930, refer to hard times.

"Business is pretty bad in New York. Most industries are running part time and a tremendous number of people are out of work. There are bread lines, army trucks feeding the unemployed and police stations giving away food.

"Still they are building bigger buildings and theatres. It is good that the people are optimistic. They all say to themselves 'Better days are coming.'"
[Bill McLarney]

Some class members were forced

to turn to occupations other than engineering. Lawrence E. Allen landed a sales job for the National Map Company, a position which, he said, "very nearly caused me to give the engineering profession a break." Although Allen did work for some months during 1930 as an engineering draftsman, letters from subsequent Bull-Sessions indicate that he returned to selling maps and eventually became quite successful at it. Allen held another distinction among his Iowa peers.

"Some two or three months ago I chanced one day to discover my wife sewing blithely away on some little garments. Needless to say it was quite a shock to learn that I was to undergo the ordeal of paternity in a few weeks. It was all arranged that the little girl was to be called Lorraine. He arrived November 30th and is already named Lawrence Edwin, Jr. Eight pounds of bone and muscle he looks like a potential engineer if ever there was one. I therefore wish to avail myself of this opportunity to formally announce myself as the first father of the class. I do not expect anyone to contest me openly." [Lawrence E. Allen]

The 1930 edition also includes a letter from Bull-Session editor, Wally Nelson, who mused about the contemporary economic situation and concluded it would be short-lived.

"We surely were dumped on the world at a time when it was tough sledding, saying the least. By living through this business depression I am sure that we have learned many a valuable lesson; and that we are trained fundamentally for the great period of reorganization which is soon to come.

Things are looking up, let's go!"
[Wallace E. Nelson]

Sadly, Nelson would not live to see the slow but eventual easing of the economic vice. He died after compiling the third edition of the Bull-Session.

By the time the second annual collection of letters was printed in late 1931, it was clear that the economic downturn was more than fleeting.

"Before anyone has time to wonder how I happen to be writing from away out here [in Los Angeles], I may as well break down and admit that it is purely a matter of financial difficulty. I got so poor that I couldn't even buy coal to keep the family warm in the Middle West." [Lawrence E. Allen]

The following year, Milford A. Bergsten's letter described a series of short-term non-engineering jobs he patched together as companies reduced workers' pay or hours to remain afloat. "Bergie" first spent two months selling hardware at the Montgomery Ward store in Burlington, Iowa. Then, "falling back on politics my next job was with the county engineering department, which lasted for three months. I worked as an extra on profile work on the laying out of new roads. [Next] was the John Deere Plow Co. of Moline in their company store here in Iowa City. The balance of the year was spent at home helping my father in his implement store. Financially the year shows no gains."
[Milford A. Bergsten]

"During the last summer the depression caught up with me. The Bell Laboratories went on a five day, then on a four day week. Finally they decided that they had done enough

research for a while so they dumped out most of their engineers. And I was among the group that joined the army of the unemployed." [Bill McLarney]

Like many other young college-educated men of the time, McLarney decided that if he couldn't work, he might as well return to school. He earned his master's degree in economics from Columbia University in 1933. "After that," McLarney wrote, "I will again become a full fledged member of the unemployed."

But McLarney was able to eke out a living as an itinerant engineer, a saga he detailed in his contribution to the 1933 Bull-Session.

"If this depression keeps up much longer I will be well qualified to assume the responsibilities of a vocational guide for I have had all sorts of experience during the last year. I was a waiter in a Swedish Beer Garden. I sold desks in a department store that had several different kinds of prices.

"And I have repaired radios. This latter kind of work is a good field in which to pick up a few dollars once in a while. I recommend it to those who are out of work at the present."

[Bill McLarney]

By February 1935, McLarney was working as a vocational guidance counselor for "dependent boys to straighten out their adjustment problems."

Another letter in the 1933 collection touches on the New Deal effort to end the Depression.

"Since the C.W.A. has come into effect, the State Water Survey Division of the Department of Registration and

Education in Illinois has put a project through in every county, in which they hire on an average of two engineers in each county to make a Survey of the ground water conditions. I happened to be the lucky one picked from this territory, so I'll be working as long as the C.W.A. holds out." [Dick Lyons]

Although descriptions of work and lack of it occupies the majority of the letters, the young engineers also wrote about their personal lives.

"Seven of us are rooming at a private home and we have quite a bachelors club. To any of you who may be in doubt as to my present standing, I am single and what is more am tied to no woman's apron strings. It is a great life to be free and single." [Milford A. Bergsten]

By 1931, "Bergie" was working for Frigidaire. Recognizing that the inevitable decline in the number of his unwed peers might be his financial boon, he ended his letter with a pitch.

"Now any of you who are married and are interested in getting an electric refrigerator, just drop me a line and I'll

give you the low down and then tell you the best one to buy."

The mechanical engineers also reminisced about their undergraduate years. Mark Plumly's letter for the 1937 volume recalled "the outstanding yearly event" of MECCA week. In his 1930 letter, Kenny Hamil longed for his Iowa City home.

"Wilmington has all the disadvan-

tages of a big city and none of the advantages. There isn't even a theater as nice as the Englert." [Kenny Hamil]

From the beginning, several engineering professors also contributed to the Bull-Sessions.

"I am looking forward with pleasure to receiving this volume of letters which Nelson is collecting," wrote Ralph M. Barnes, associate professor of industrial engineering. "I hope he has better luck getting the letters in on time than I had last year getting your laboratory reports—but why bring that up."

And in the 1938 volume, Professor Croft, head of the Department of Mechanical Engineering and initiator of the Bull-Sessions, offered the following piece of good news:

"This letter has been somewhat tardy in reaching your class secretary in view of the fact that there has been a renewal of the old question of moving our College of Engineering to Ames. It is with a certain pleasure that we can now report that this issue is again dead for this session of the legislature."

By 1938, the content and tone of

"I get my inspiration to work by looking

the letters had changed dramatically. The Great Depression had eased, Americans were turning their eyes to problems in Europe, and the mechanical engineering class of 1930 finally could write about permanent jobs with industry giants. Thirty-six-year-old Larry Allen had left the map business, returned to the engineering fold, and worked two straight years with the

Lennox Furnace Company. Although the first words of his 1938 letter echoed the trials of the previous eight years, Allen—like the other members of Iowa's mechanical engineering class of 1930—had weathered the storm.

"Another year has completed its span in this vale of tears, and I am not only still working for the same company, but even living in the same house, which is almost a record for me. It is a wonderful age in which we are living.

"Lennox is now producing entirely automatic heating plants of greater beauty than the grand piano of grandmother's day, and I presume each of you has equal reason to be proud of his company. I note that du Pont, especially, is doing its bit to make the world a better place in which to live by discovering a substance from which ladies' hose can be made three times as sheer as silk ones.

"Having told all the news, I must now go and write my boss about what an inadequate salary I am receiving. Sincerely, Larry Allen"

at the bread lines."

Bill McLarney, Class of 1930

"And to those among us who are discouraged and think that they are out of a job on account of their own fault, may I cite the remark of a business executive as he looked at a hunger march 'There go I but for the grace of God.'" [Bill McLarney.]

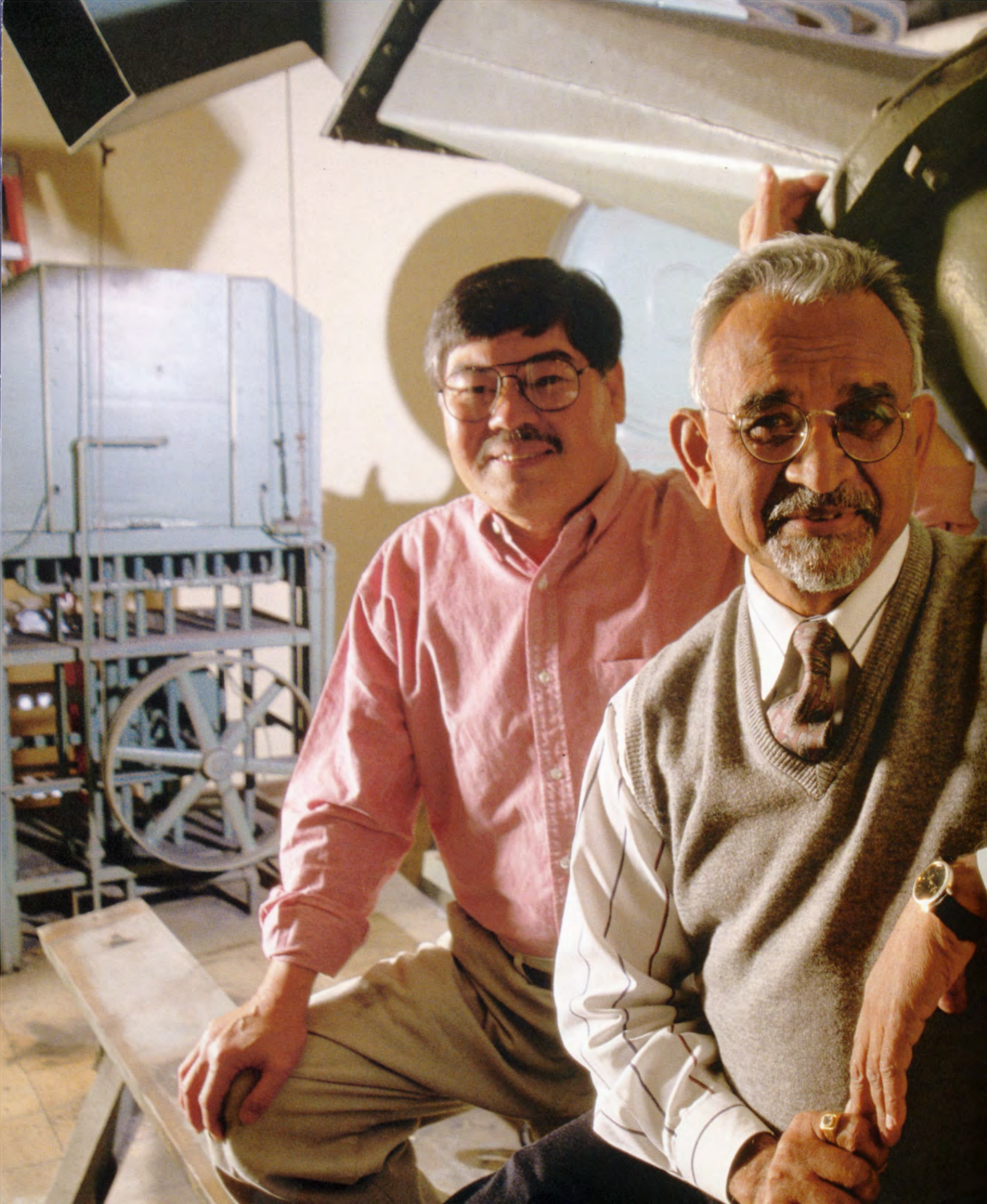
Saga of Rocklin—Entrepreneur

A few years ago during an alumni gathering in Sioux City, Iowa, University of Iowa President Mary Sue Coleman was chatting with Jim Rocklin (BBA 1964, JD 1967) who mentioned a collection of booklets he had inherited from his father, Isadore Jay Rocklin (BS 1930 in mechanical engineering). The booklets, Rocklin said, contained letters from the mechanical engineering class of 1930, written during the nine years immediately following their graduation. The narratives proved to be a unique and fascinating treasure trove detailing the lives of ordinary men living in extraordinary times.

Like many of the letter writers, Isadore Rocklin described the jobs he had during the Great Depression. His employers included a Sioux City foundry, a Chicago company researching the viability of wind power, an air conditioning production company, and his father's Sioux City greenhouse business. During those years, Rocklin—good engineer that he was—also tinkered. He designed wind-powered electric equipment and a portable room cooler that relied on ice, manufactured under the trade name Kool-Kleen. In his 1937 letter, Rocklin wryly added that since 1935, "I investigated thoroughly the possibilities for losses in conducting one's own business by attempting to manufacture a coal stoker."

By working as a one-man designer, producer, marketer, and shipper, he built Rocklin Manufacturing into a thriving business. After World War II, Rocklin invented a process that continues to be the company's focus. By melting infinitesimal particles of a metal surface and electronically infusing wear-resistant tungsten carbide onto the surface, "Rocklinizing" increases the productivity and reduces the wear and cost of high-speed cutting tools.

Rocklin continued to work at his plant until shortly before his death in 1993. In a 1990 column for *Nation's Business*, Rocklin wrote, "During my life, I've learned that flexibility and the willingness to stick to a task that you believe in are the most important characteristics of an entrepreneur. If you love what you do, believe in it, and strive for excellence, who can stand in your way?"





Unraveling *Ol' Man* River

BY JEAN FLORMAN

PHOTOS BY JON VAN ALLEN
AND TATSUAKI NAKATO

Six years ago, Tatsuaki Nakato took a trip down the Mississippi River that would change his life. The journey also sparked an idea that—with careful tending by IIHR-Hydrosience & Engineering (formerly Iowa Institute of Hydraulic Research)—has evolved into plans for a river research center that will be the first of its kind in the world.

In the fall of 1995, IIHR associate director Nakato and several other river experts spent more than five weeks aboard an 18-foot jon boat exploring the upper Mississippi River from St. Paul, Minn. to Cairo, Ill. As they zigzagged from one shore of the river to the other in search of data, the researchers covered considerably more than the normal 868-mile St. Paul-to-Cairo distance.

"Our mission," Nakato says, "was to discover everything we could about riverbank erosion caused by barge- and boat-induced waves. I'd been on the Big River many times before, but I was amazed at the extent of the erosion we saw during that trip."

In addition to Nakato, the riverboat crew included environmental engineers, geomorphologists, hydraulic engineers, and biologists from a host of federal and state agencies and universities.

"Environmentalists and engineers usually don't have much to say to each other," Nakato says. "But the very complexity of this river and its tributaries made us listen to each other and learn a lot. We came to respect each other's various perspectives."

"And like Huckleberry Finn," he adds, "we also had fun."

Nakato's own area of expertise is sediment transport modeling in lab settings. Although this approach helps unlock the secrets of small-scale river activity, including local erosion and deposition of river beds, it alone cannot describe large-scale processes such as long-term ecological and geomorphological changes.

From its humble beginnings as a trickling Minnesota brook, the Mississippi River travels 2,350 miles and becomes more than a mile

In envisioning a world-class center for riverine studies, Tatsuaki Nakato (left) and V.C. Patel built on their work at IIHR-Hydrosience & Engineering, which Patel directs.



Aerial view of the site where the Mississippi Riverside Environmental Research Station will be built.

MRERS

wide before emptying into the Gulf of Mexico at New Orleans. This magnificent water ecosystem is one of the most important economic, environmental, archaeological, and historical resources in the world. And no other river can claim such resonance in the national psyche of this country.

Yet the Mississippi's vast and rich ecosystems also present a tremendous challenge to researchers who strive to understand the river's complex and long-term responses to activities that affect it. Farming, navigation, dredging, channelization, waste-heat and waste-water discharge, tributary controls, locks and dams, air pollution, recreational use—a multitude of forces have shaped the shores, water, and riverbed of the Mississippi for more than a century.

As Nakato continued his 1995 trip down the Mississippi, it became clear to him that studying the river's complex ecosystems demands a multidisciplinary team, whose members each can bring his or her own expertise to the effort while also collaborating with and learning from the others. Thus was born the idea for The University of Iowa Mississippi Riverside Environmental Research Station (MRERS), a collaborative research site that will focus on the

critical issues affecting management and restoration of the Mississippi riverine ecosystems.

"For many decades," IIHR director V.C. Patel says, "researchers at the Iowa Institute of Hydraulic Research have been renowned for their theoretical studies, lab experiments, and computational modeling of river flow and hydraulic structures. But the question always has been, 'How realistic are these?' Until now, Iowa researchers have had to compare their laboratory data with measurements of actual river behavior on a project-by-project basis. The new research station will allow us to monitor river hydraulics and ecology in a natural setting and over longer periods of time."

When Patel and Nakato began formulating a proposal for the river research station, they turned to two venerable research centers as models: Scripps Institute of Oceanography in San Diego, Calif. and Woods Hole Oceanographic Institute in Woods Hole, Mass.

Although he could not find any other research group devoted strictly to the complete study of a river, Nakato did learn how Scripps and Woods Hole have tackled ocean research.

"The historical records at Woods Hole are particularly impressive,"

**"I'D BEEN ON THE
BIG RIVER MANY
TIMES BEFORE, BUT
I WAS AMAZED AT
THE EXTENT OF THE
EROSION WE SAW
DURING THAT TRIP."**

Tatsuaki Nakato

Nakato says, "and they have tremendous research equipment there. And both organizations are multidisciplinary and holistic in their approach."

Despite the vital significance of inland waterways on every continent, no other university owns and operates a comprehensive station devoted to river research. Although the Environmental Protection Agency, the Army Corps of Engineers, and university researchers have studied the Mississippi for decades, the new station will provide the first opportunity for researchers to investigate the river holistically, over long periods of time, and in its natural setting.

With enthusiastic support from Patel and the IIHR staff, the MRERS concept quickly garnered significant funding from the Roy J. Carver Charitable Trust, headquartered in Muscatine, Iowa, and support from local residents.

"The Carver trust generously provided \$1.2 million of the initial \$2.3 million start-up costs," Patel says. "That funding cracked the hardest nut for us—the cost of the building itself. The Carver support served as a call to action."

A suitable site for the research station was found seven miles east of Muscatine in the riverside town of Fairport, where the Iowa Department of Natural Resources (DNR) operates a fish hatchery.

Patel says, "The DNR ecologists told us, 'We know fish, but we don't know the dynamics of the river.' They were enthusiastic about having the research station nearby, and so the state offered 2.5 acres of land to the University at no charge."

Designed by Stanley Consultants, Inc., (Richard Stanley, MS 1963 in sanitary engineering, is chair of parent company, The Stanley Group), the 7,400-square-foot structure will open in December 2001. In the meantime, Nakato is supervising the selection of lab equipment, computers, and other research tools.

"At first," Patel says, "we'll rely on relatively modest resources. We can borrow the DNR boats and consult with the two biologists at the DNR fish hatchery. Eventually, we hope to have researchers from around the world using this facility to conduct research on various aspects of the river."

Although this is the first facility in the world to address river research on such a broad scale, it is not the first facility on this site to study Mississippi River ecology. In 1914, a federal fisheries laboratory

was constructed almost precisely where the new MRERS station will be located. Researchers at the early facility studied freshwater mussels, which were being harvested by the millions and turned into buttons—mostly by child laborers in Muscatine. A 1917 fire destroyed the wooden building at Fairport. Although the facility was rebuilt, the advent of plastic around the

time of World War I signaled the death knell for the "pearl" button industry. Mussel research soon sputtered to a halt and the Fairport hatchery was abandoned.

In its new life, the site will offer laboratory and study space to researchers from nearby and around the world.

"In the future," says Jerry Schnoor, "the MRERS station may be used to investigate questions such as the causes and cures of downstream transport of fertilizer chemicals."

Schnoor is the F. Wendell Miller Distinguished Professor of Civil and Environmental Engineering and Co-Director of the Center for Global and Regional Environmental Research. He adds that "nitrogen fertilizer chemical run-off from farm fields, feedlots, and tile drainage are believed to be responsible for the 'overnourishment' of the Mississippi River and its tributaries."

World-renowned engineers are not the only scholars who will benefit from the MRERS. Nakato also is keen to offer access to younger students, who will be invited to participate in summer research camps and periodic scientific workshops. A West Liberty, Iowa, high school student already has contacted Nakato about the possibility of working at the station next summer.

Researchers from universities, agencies, and private foundations will be able to rent space and equipment at the station to conduct research and collaborate with staff members and other visiting experts. Nakato already is planning a summer 2002 workshop that will invite a dozen international scholars to share their insights on river ecology.

"It will be repeated every other year," he says, "and each time we'll focus on a different aspect of river life—say, fish habitats, pollution, or sediment transport. This research station will enable us to attract some of the finest minds working on the issues of river ecology and to carve out a real leadership role in the field."



Shaping

"I want to help prepare bright and creative students—whether from an engineering or business background—to be outstanding leaders in technological positions."

Gary Seamans

Student Leaders

by Jean Florman

Photographs by Jon Van Allan

Not only have College of Engineering alumni helped finance college facilities, equipment, and endowed chairs, but they also pass on their knowledge and experience to the next generation of engineers.

In October 1999, a group of Iowa students benefited from just such a learning experience when Gary and Camille Seamans invited them to spend a day in the couple's Illinois home. Eleven engineering and five business students attended the first Seamans Student Leadership Institute.

The Seamans, for whom the newly renovated engineering building is named, are well-suited to direct a leadership training program. Gary (BS 1971 in electrical engineering) is the retired chair and CEO of Westell Technologies, Inc., and Camille served as director of administration and human resources for the MacArthur Foundation for 20 years.

The Seamans established the leadership institute to help

students consider, discuss, and wrestle with leadership issues such as professional ethics, self- and group motivation, and diversity in the workplace.

Gary Seamans says that he had been wondering for some time how current business and engineering leaders could develop leaders for the future.

"More specifically," he says, "what can we offer our Iowa engineering students who may not want to become practicing engineers, but want to be managers in a technological discipline?" The institute also targets business students who may some day be managing a technology-based business.

The institute's first seminar in 1999 was led by Forrest Holly, professor of civil and environmental engineering; Nancy Schneider, director of academic development for the College of Engineering; and Steve Hubbard, assistant director for undergraduate programs for the Henry B. Tippie

College of Business. In addition to Gary Seamans, two other members of the College of Engineering Development Council shared their career experiences. Phil Francis (MS 1960 in mechanical engineering) is managing partner and member of the board of directors of Mascon Global, Ltd.; Barb Sines (BS 1980 in industrial engineering) is vice president and general manager, electronic operator interface businesses and industrial computers, Rockwell Automation (see pages 18-19).

"Phil and Barb have achieved mightily," Gary Seamans says. "But the really wonderful thing was that they shared with the students not only their professional successes but also their failures. It was a great way for students to learn *why* things sometimes don't go right."

The institute format uses both small- and large-group sessions to expose students to real-world challenges, immerse them in hypothetical situations,



Gary Seamans (opposite) hosts a lively discussion of leadership issues, joined by students, faculty, alumni, and University of Iowa President Mary Sue Coleman (middle, above).

and introduce them to key Iowa engineering alumni. It also has strengthened the bond between the engineering and business colleges—a partnership already nurtured by a technological entrepreneurship certificate program.

The Seamans hosted the second institute in late March 2000. This time, the event spanned an evening and the

personality relates to leadership style. Before the weekend seminar, the student completes two venerable personality instruments—the Myers-Briggs Type Indicator and the Kersey Temperament Sorter.

“These surveys can reveal a lot about who we are and how we function in the world,” Gary Seamans told the group. “They bring to light

lives. In a series of inspiring stories, students spoke about mothers, fathers, siblings, teachers, employers, and others who have shaped their lives.

“Now take these stories and go into the world as leaders, teachers, mentors, and coaches,” Camille Seamans urged the students.

“How you interact with your employees,” Gary Seamans

ing back to the community.”

And what do students say they learned?

“The key to motivating others is getting them past their fear of failure,” says one.

“The best leaders have an exceptional ability to listen to people,” adds another.

One student was particularly grateful for the weekend’s hands-on approach. “We

“Every one of us is different, but what makes a good leader is not one personality type, but the recognition of how you can direct your energy and that of your colleagues and employees toward a shared goal.”

Gary Seamans

next full day. Holly, Schneider, and Hubbard returned and were joined by University of Iowa President Mary Sue Coleman; Nancy Hauserman, Tippie College of Business dean of undergraduate students; and Larry McMullen, John Deere Dubuque Works manager of engineering and construction equipment.

After Gary Seamans’ opening remarks, Schneider and Hubbard guided students through a series of fun, but purposeful games.

“Games help students discover information about each other that can be the building blocks for the weekend’s interactions,” Hubbard says. “They’re also great ice-breakers.”

Schneider and Gary Seamans next explored how

personality characteristics such as how we direct our energy for work, how we perceive the world around us, and how we make decisions.”

The students were amazed by what their answers revealed.

“This is fantastic,” one said. “I really do rely a lot on intuition, and trying to figure out abstract ideas has always interested me more than a lot of socializing.”

“People have always told me that I’m conscientious and orderly,” added another, “although they don’t always mean it as a compliment!”

Camille Seamans then explored mentors and role models. After describing her own experiences with role models, she asked students to talk about one person who has made a difference in their

said, “how you identify problems and come up with solutions, even your ability to be creative—all these things depend on who you are. Every one of us is different, but what makes a good leader is not one personality type, but the recognition of how you can direct your energy and that of your colleagues and employees toward a shared goal.”

One of the most fruitful discussions focused on ethical dilemmas presented as hypothetical situations. Students broke into small groups to wrestle with possible solutions, then everyone gathered together again to share ideas.

“It’s important for these students to remember the ‘people things’ about their careers,” Hauserman says, “and the importance of always giv-

talked about real-world stuff. Hallelujah!”

And perhaps the best summary was this: “I learned that leadership is something more than just leading. It’s also encouraging others to reach their fullest potential.”

Forrest Holly, professor of civil and environmental engineering (standing, opposite), and Larry McMullen, manager of engineering and construction equipment at John Deere Dubuque Works (seated, in front of Holly), pose a hypothetical situation for students to resolve.

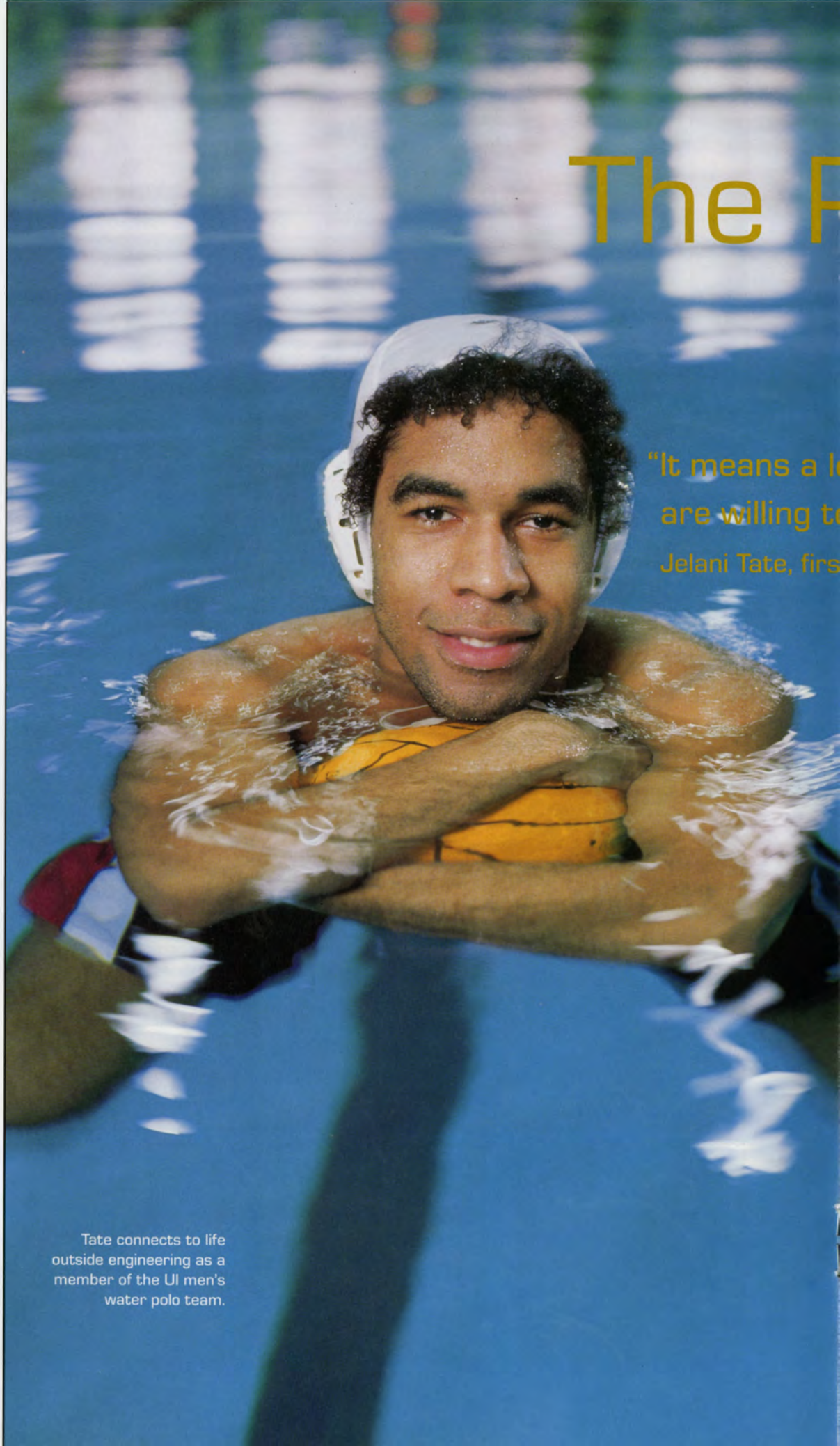


1999-2000 Scholarships

Sponsors	Students
3M	3
Alcoa	7
Alexander	19
Andersen	1
Blackburn	1
Buchanan	4
Carter	2
Caterpillar	4
Caywood	78
CEC	1
Clements	17
Collins/Rockwell	10
Dimond	10
ECE	27
Fethke	1
Fritz Louis	1
Higbee	23
Hinton, Cathy	1
Hughes Electronics	1
Hunt	1
Kehn	3
Kennedy Memorial	1
Knowler	2
Ladehoff	1
Lambert	4
Lichtenberger	2
Mascagni	2
McGrath	3
Miller	1
Petrik	5
Pierce	3
Plumly	3
Poston	1
Robolino	1
Russ	28
Samek	1
Sample	6
Scholz	1
Shive Memorial	1
Sprint	1
Square D Co.	3
Stebler	53
Summers	1
Telecomm	2
Vierck	1
Williams	6
Woodburn	1

The A

"It means a lot
are willing to
Jelani Tate, first



Tate connects to life
outside engineering as a
member of the UI men's
water polo team.

Power of Scholarships

by Jean Florman

ot to students that engineering alumni
to help support our educational goals."

year engineering student

Although only in his first year at The University of Iowa, Jelani Tate already has impressive credentials. An honor student at his Naperville, Ill. high school, Tate recently scored high enough on his five Advanced Placement exams to earn him an AP Scholars Award. For years, Tate has set his sights on an engineering degree as a springboard to a career in patent law.

Clearly, he is an example of the top students that Iowa works hard to attract.

But for the engineering college, Tate came very close to becoming "one who got away."

Tate applied to a number of engineering colleges across the country.

"I really liked The University of Iowa," Tate says. "The college seemed less routine, more per-

sonal, and more friendly. People here made me feel more connected."

But despite his instinct that Iowa was the right school for him, Tate hesitated to commit to four years here. The reason? Scholarships.

"Although Iowa offered me financial assistance," Tate says, "it didn't match the full tuition scholarship I'd been offered elsewhere. It's hard to decide to go out of state anyway, because the cost is so high. And when one school offers more help, that puts a lot of pressure on applicants to attend there, even if that school isn't their first choice."

"Jelani was incredibly thorough and asked a lot of questions," says Jane Dorman, director of admissions and outreach for the college. "He took a long time to decide which school to attend."

Fortunately for Tate—and Iowa—his parents stepped in to help.

"My dad told me that whatever school I chose should be where I wanted to go," Tate says. "He said that if I had to, I could work or get a loan so I could follow my dream."

Tate's mother, who is a computer engineer, also framed the issue succinctly.

"Where would you go," she

asked, "if money weren't an issue?"

Tate's answer: "Iowa."

Although his financial aid package doesn't match what he was offered elsewhere, Tate is grateful for the support provided him through the Engineering Excellence Scholarship, Iowa National Scholars Award, Opportunity at Iowa Scholarship, and Electrical and Computer Engineering Freshman Scholarship Award. The Engineering Excellence Scholarship is particularly meaningful for the young engineering scholar.

"The Engineering Excellence Award is funded in part by alumni," Tate says. "It means a lot to students that engineering alumni are willing to help support our educational goals."

He adds that a number of first-year students in the college are paying out-of-state tuition at Iowa by taking out loans.

"I am thankful for the scholarship opportunities that I've been given," Tate says. "The other option would have been to take out loans. For some students, loans are the only way to pay for college, but they add new financial responsibilities after graduation. My scholarships have allowed me to make it through college financially, and I'm very grateful for that."

Barry Butler, Dean of the College of Engineering (below), chats with Joe Summers (BS 1948 in civil engineering) during the October 2000 tailgate.

Students enjoy the roof-top terrace (right), technologically advanced classrooms (far right, top), and expansive computer labs (far right, middle).



A WHOLE NEW WAY FOR HAWKEYES TO TAILGATE

Photos by Jon Van Allen

With the opening of the new addition to the Seamans Center for the Engineering Arts and Sciences last fall, alumni, friends of the College, faculty, staff, and students were treated to a new tailgating opportunity.

On Homecoming Saturday, doors were open to invited guests to see first-hand examples of the state-of-the-art teaching and research facilities that have been under construction the past four years. More than 300 guests strolled through the four floors, admiring electronic classrooms, new computer laboratories, seminar and help-study rooms, and the grand four-story atrium that is central to the new addition. Most of all, the morning provided a chance for alumni, faculty, and staff to renew old acquaintances and bring up fond memories of campus life.

The Tailgate Open House was the first of what is planned as an annual Homecoming tradition at the Seamans Center. The next event is scheduled for Saturday, September 29, 2001—the day after official dedication ceremonies will be held on the new John Deere Plaza at the entrance to the Seamans Center. If you plan to attend, send a note in advance to Dean's Office, 3100 Seamans Center for the Engineering Arts and Sciences, Iowa City, IA 52242-1527, or E-mail us at engineering-adm@uiowa.edu. We hope to see you!





Alumni, faculty, staff and other friends of the College of Engineering mingle in the atrium of the new addition (left), while a local jazz quartet serenades them from above (below, bottom).



Engineering Conne

When Barb Sines was excelling in high school math and science in Mason City, Iowa, she got some good advice from her mother.

"I really didn't have a clue what I wanted to do," Sines says, "but she coaxed me toward engineering and encouraged me to investigate both state engineering colleges."

But when the young woman announced she wanted to join her older brother and sister at The University of Iowa, her mother said, "Can't you go somewhere different? I want to try some new restaurants!"

Two decades after she graduated from Iowa with a bachelor's degree in industrial engineering, Sines, who is the vice president and general manager of Rockwell Automation's electronic operator interface and industrial computer businesses in Milwaukee, Wis., remains convinced she made the right choice. Using her education as a foundation, Sines has risen from Iowa City engineering student to world-class corporate executive—a career ladder she built and ascended one rung at a time.

Shortly after Sines graduated in 1980, she joined Square D Company in Cedar Rapids. The newly minted industrial engineer immediately immersed herself in the company's production and management cultures to learn the manufacturing process from start to finish.

"My desk was right on the shop floor," Sines recalls. "That setting provided a whole new facet to my education as an engineer."

From her dusty vantage point, Sines gradually learned the finer points of producing molded case circuit breakers, from stamping, molding, and plating to assembly and finish work.

"I wasn't even 25 years old," Sines says, "and I quickly realized there were people at Square D who had been putting part A onto part B for longer than I'd been alive."

Sines' shop-floor "office" also gave the young industrial engineer a close look at the efficiency of Square D's operation from the ground up. On a daily basis, she observed and talked with line workers, plant technicians, and maintenance personnel. She encouraged workers to devise creative solutions to problems and to increase their efficiency. Sines also learned the intricacies of balancing employee and company interests and running a shop whose workers were represented by two unions.

"I decided early in my junior year at Iowa that I was more interested in economic theory than electromagnetic theory," says Sines, who spent her college summers as a facilities planning intern at the University of Iowa Hospitals and Clinics. "Industrial engineers manage people, not things, and management is what intrigues me."

Even though she has never applied her knowledge of calculus or thermodynamics, Sines says learning those engineering basics was critical to the success of her work.

"Learning the ground rules of the other engineering subdisciplines teaches you to persevere," she says. "But even more, understanding engineering fundamentals is vital for understanding what other engineers do and how they do it. That's absolutely essential if you're going to be managing a manufacturing operation."

When she and her young family left Cedar Rapids for Nashville, Tenn. in 1991, Sines was a plant manager responsible for a \$110-million manufacturing facility that



annually produced thousands of circuit breakers for the world market. She managed 800 employees—500 of whom were organized into a bargaining unit. The rest were salaried personnel, including engineers, laboratory technicians, finance experts, and human resource personnel.

"When you have a family, it's a juggling act to change jobs and move," Sines says. She and her husband, Bud, had their first child while she was still in engineering school and he was in dental college. "But I think living in different areas of the country has been a good experience for our family. The children are outgoing and adaptable, and appreciative of the cultural benefits each of our 'homes' has offered."

During her four years at the Tennessee plant, Sines oversaw all marketing activities for the firm's \$200-million panelboard and switchboard business and also honed her international marketing skills. After a brief stint in the company's Chicago offices, she moved to Rockwell Automation in Milwaukee.

At Rockwell, Sines is in charge of the

ctions

by Jean Florman



Barb Sines (standing, top left), global marketing manager for Rockwell Automation, sees her work as one of making connections among engineers, customers, and production managers.

“There are so many opportunities for engineers, as long as they stay connected to people. And that’s really my job—to help other engineers and corporate managers stay connected, to solve problems and in the process add value to the product.”

Barb Sines

engineering, manufacturing, and global marketing of the company’s graphical and text display terminals, which control automated production lines in various industries worldwide.

“There are hundreds of thousands of these dedicated terminals in industrial plants around the world,” Sines says, “and they control everything from turning a production line on and off to temperature variation in batch processing.”

Rockwell Automation’s customers include Procter and Gamble, Nestle, and the big three auto makers. Keeping up with

the technical and production needs of her clients means that Sines spends about half her work year on the road—or more accurately, in the air, since many of the companies and plants she deals with are in Europe, Asia, and Canada.

It’s no wonder that Sines relishes her leisure time, which she spends cheering the high school wrestling team her husband coaches and relaxing with her fourth-grade son. When Sines does travel for pleasure, it’s usually to visit her two daughters in college.

Sines also makes a special effort to stay connected to Iowa’s College of Engineering.

As a member of the College of Engineering Advisory Board and Development Council, Sines visits campus several times yearly to consult with other board members and the dean about the future of the college. While in town, she also connects with students by presenting industrial engineering seminars, talking to Society of Women Engineers members, and treating students to pizza at a local restaurant.

UI names P. Barry Butler Dean of College of Engineering

The University of Iowa has named mechanical engineering professor P. Barry Butler dean of the College of Engineering, effective Nov. 21, 2000. Butler, who came to the College in 1984, most recently chaired the Mechanical Engineering Department, and previously served as interim dean during 1999 and associate dean for academic programs from 1997-99.



P. BARRY BUTLER

UI Provost Jon Whitmore said that Butler's research, teaching, and administrative experience make him an excellent choice to lead the college.

"Professor Butler has provided the College of Engineering with outstanding service, both as interim dean and associate dean. He has been directly involved with recruiting and appointing faculty, handling student affairs issues, and working on curriculum changes," Whitmore said.

Professor Forrest Holly, chair of the Engineering Dean Search Advisory Committee, said that the committee had been very impressed with the depth of faculty-staff support for Butler's candidacy. The committee is confident that the college community is ready to work with Butler in strengthening graduate programs, curriculum revision, preparation for accreditation review, and fundraising. Butler succeeds Anthony Hines, who resigned to devote full time to teaching and research.

Butler is a nationally recognized expert in thermal science and energetic materials. His recent research has included a National Highway Traffic Safety Administration study on conventional auto airbags. He has published widely in professional journals.

He earned his bachelor's and master's degrees in aeronautical and astronautical engineering in 1979 and 1981, respectively, as well as a doctorate in mechanical engineering in 1984, all from the University of Illinois at Urbana-Champaign. Butler served as a visiting faculty member at the Université de Provence, Marseille, France, in 1994 and 1997, and as a visiting faculty fellow at Sandia National Laboratories, Livermore, Calif., in 1991.

His professional memberships and honors include Associate Fellow of the American Institute of Aeronautics and Astronautics (AIAA) and membership in The Combustion Institute, American Society for Engineering Education, Society of Automotive Engineers (SAE), and the American Society of Mechanical Engineers (ASME). He received the SAE Ralph Teetor Educator Award in 1991 and the ASME UI Student Branch Outstanding Professor Award in 1991 and 1995. He is associate editor of the AIAA Journal of Propulsion and Power and a member of the organization's Propellants and Combustion Technical Committee, 1994 to present.

Fischer Named Associate Dean for Academic Programs

Gary W. Fischer, associate professor of industrial engineering, has been appointed associate dean for academic programs for the College of Engineering.

Fischer, who has been with the College since 1969, is responsible for guiding collegiate programs, including curriculum, accreditation, and undergraduate enrollment.

In addition to coordinating the College's next accreditation process by the American Board of Engineering and Technology (ABET) by 2002, Fischer already is leading initiatives to establish a technical communications resource center, designed to assist students in improving their communications skills in conjunction with their engineering studies.

Fischer holds four degrees from The University of Iowa: a BA degree in general science and a BS degree in mechanical engineering in 1964, an MS degree in mechanics in 1966, and a PhD degree in mechanics in 1969.

His research areas focus on manufacturing engineering, production engineering research and development, and biomechanics.

Prior to his appointment at The University of Iowa, Fischer served as a staff engineer for Deere & Company, Moline, IL.



GARY W. FISCHER

McMullen Serving as UI Alumni Association President

Engineering alumnus L.D. McMullen is serving as chair of the board of The University of Iowa Alumni Association for 2000-2001—the first engineering graduate to hold the position. McMullen also serves as College of Engineering representative on the Alumni Association Board of Directors, and has chaired the board's finance committee. McMullen also served as chair of the College's Advisory Board during the initial phases of establishing a case for the Engineering Building modernization project.

McMullen holds three degrees from the College of Engineering—a BS degree in civil engineering (1964), and MS (1968) and PhD (1970) degrees in environmental engineering. He is chief executive officer and general manager of the Des Moines, Iowa, Water Works. During his 30-year career, he has been recognized at both the national and regional levels for his contributions toward producing safe and quality drinking water.



L.D. MCMULLEN

Three New Members Inducted into Distinguished Engineering Alumni Academy

The University of Iowa College of Engineering inducted three new members into its Distinguished Engineering Alumni Academy for contributions toward personal engineering achievement, leadership, and service to the profession and society.

Allen Henry and James R. Lightner were inducted into the academy June 10, 2000, during the college's spring reunion dinner. Helmut E. Kobus was inducted during the July International Conference on Hydrominformatics.

Henry, who received his master's degree and doctorate in mechanics and hydraulics from The University of Iowa in 1968 and 1971, respectively, is retired vice president and general manager of JDS Uniphase Broadband Products, a fiber optics manufacturer. From 1996 to 1999 Henry was chairman, CEO, and president of privately held Broadband Communications Products prior to its acquisition by Uniphase Corporation. In 1996, he retired from Harris Corporation, Melbourne, Fla., after 23 years of service. His last position at Harris Corporation was president of Electronic Systems Sector, an organization of 7,000 people and annual revenue of \$1 billion, with responsibility for defense, energy management, air traffic control, weather processing, criminal justice, satellite and terrestrial communications, and aerospace markets. He has served as a member of The University of Iowa Engineering Building Campaign Steering Committee. In addition, he is a major contrib-

utor and fundraiser for the Women's Center Capital Campaign in Melbourne, Fla., which aids more than 10,000 women and children annually. Also, he has served as a director, since 1994, and as board chairman, since 1999, of the 454-bed Holmes Regional Medical Center, Melbourne, Fla.

Kobus, who received his master's degree and doctorate in mechanics and hydraulics from The University of Iowa in 1963 and 1965, respectively, is an internationally respected researcher and educator in the hydrosociences and engineering. He is Director of the Institute for Hydraulics, University of Stuttgart, Germany and past president of the International Association of Hydraulic Engineering and Research (IAHR). He is the author of Hydraulic Model Testing, a standard text at many universities. Shortly before becoming the director of the Stuttgart, Germany, Institute for Hydraulics in 1977, he formed a research group that has since been internationally recognized for its non-traditional approaches to environmental problems. He recently led an international agreement to exchange academic staff and students between The University of Iowa Department of Civil and Environmental Engineering, and the Water Resources Engineering and Management Program Institutes at Stuttgart. Since 1977, he has been professor at the University of Stuttgart, director of the Institute for Hydraulics, chair for Technical Hydromechanics and Hydraul-

lic Engineering, and, since 1988, chair for Hydraulics and Groundwater.

Lightner, who received his bachelor's degree in mechanical engineering from The University of Iowa in 1944, is retired chairman and president of Electrospace Systems, Inc., Richardson, Texas. In 1970 he, along with four other engineers, started Electrospace Systems at a dining room table with a calculator and a three-year financial plan. Under his guidance as chairman, president, and treasurer, the company has become one of eastern Texas' largest employers. In 1987, the designer and manufacturer of antennas and airborne communication systems was sold to the Chrysler Corporation. In 1953, he joined Collins Radio Company, where he managed and designed major programs such as antenna systems for Minuteman missiles and the Atlas-Titan rocket. At Collins Radio he also served as division director of fabrication, responsible for total operations in building and fabricating parts for the Dallas region, and as division director of production, involved in the assembly, test, and delivery of communications and antenna equipment for weather radar and broadcast facilities. Lightner has served as a member of several business boards and advisory councils and has contributed considerably to community service in Iowa, Ohio, Texas, and Washington, D.C. He is a member of The University of Iowa Presidents Club and the Alumni Association Honors Circle.



ALLEN HENRY



JAMES R. LIGHTNER



HELMUT E. KOBUS

College Welcomes Three New Faculty



JULIE L. P. JESSOP

Julie L. P. Jessop

- Assistant professor, chemical and biochemical engineering.
- BS (1994) in chemical engineering, Michigan State University.
- PhD (1999) in chemical engineering, Michigan State University.

Professional experience

- Visiting assistant professor, graduate research assistant, research assistant, and undergraduate research assistant, Michigan State University.
- Manufacturing engineering summer intern, Amway Corporation.

Research interests

- Polymers and the use of spectroscopic techniques (fluorescence, absorption, Raman scattering, etc.) to characterize reactions in these systems.
- Microlithography and spectroscopy.

"When I interviewed at Iowa, I first noticed the collegiality of the Chemical and Biochemical Engineering faculty. I also noted that there were several centers on campus that would facilitate my research plans, and faculty members in the college and university with whom I could form collaborative research ties."

"When I received my offer, I was impressed by the commitment of the university, college, and department to provide me with the necessary tools to be a successful and productive faculty member. Finally, my husband and I are Midwesterners, and we were thrilled to stay in the Big 10 Conference!"



MICHAEL MACKEY

Michael Mackey

- Associate professor, biomedical engineering.
- AB (1983) in biophysics, University of California, Berkeley.
- PhD (1988) in biophysics, University of California, Berkeley and San Francisco Graduate Divisions.

Professional experience

- Affiliated scientist, Istituto Nazionale di Fisica, Legnaro National Laboratory, Legnaro, Italy.
- Assistant professor, and research associate, Washington University School of Medicine, St. Louis, Mo.
- President's research fellow, University of California, Berkeley.

Research interests

- Nonequilibrium thermodynamic theory of living systems.
- Characterization of the mathematical nature of intracellular motion.

"Having spent the first years of my career developing a theory of biological systems and developing new technology to experimentally test this theory, I was attracted to Iowa because of its excellent reputation for supporting collaborative, interdisciplinary interactions among its diverse faculty."

"This career move for me was not without some risk, as I was accepting a primary appointment in engineering and a secondary appointment in medicine, and I knew that I would be very busy getting established in both colleges."

Madhavan Lakshmi Raghavan

- Assistant professor, biomedical engineering.
- BE (1992) in mechanical engineering, Coimbatore Institute of Technology, India.
- PhD (1998) in bioengineering, University of Pittsburgh.

Professional experience

- Post-doctoral fellow, Thayer School of Engineering and Section of Vascular Surgery, Dartmouth College.

Research interests

- Vascular biomechanics.
- Abdominal aorta aneurysms.
- Cerebral aneurysms.

"I couldn't have chosen a better place than The University of Iowa to begin my career in teaching and research. The collaboration with a top-class medical center was a major attraction, not to mention the long-standing reputation of the Department of Biomedical Engineering. It took me a few months after joining the faculty to realize the breadth of opportunities for collaborative research available to me."



MADHAVAN LAKSHMI RAGHAVAN

1930s

Himie Voxman (BS 1933 in chemical engineering) received a Lifetime Achievement Award from the International Clarinet Association at its July 2000 meeting at the University of Oklahoma. The award honored his "outstanding research, teaching, publication, and service to the world of clarinet." Voxman, retired director of the UI School of Music, is the third member of the association and the first American to be so honored.

Wilson A. Charbonneau (BS 1935 in electrical engineering) is retired but is still active in the Engineers Club of Dayton (Ohio) of which he has been a member since 1947.

Francis D. Cooke (BS 1936 in chemical engineering) is retired and living in Montebello, Calif.

1940s

Frederick W. Bone (BS 1941 in chemical engineering) is retired and living in Bedford, Va.

Maurice W. Putman (BS 1942 in chemical engineering) is a research consultant with Chuck Hause and Associates, Santee, Calif.

Fouad Naji Khabbaz (MS 1947 in chemical engineering) is retired and living in Hercules, Calif. He corresponds regularly with **Joe Azar (MS 1949 in chemical engineering)** and **George Madany (MS 1947 PhD 1951 in chemical engineering)**.

Ivan E. Beckwith (BS 1948 in mechanical engineering) retired from NASA and is living in Timberville, Va.

Kenneth E. Bratney (BS 1948 in civil engineering) is chairman of the board of KBC Group, Des Moines, Iowa. The engineering and construction division of KBC is working with Con-Agra and ADM to design, construct, and equip a 40,000 bushel per hour wheat cleaning and ship loading facility on the Columbia River at Kalama, Wash.

Orrin J. "Bud" Gode, Jr. (BS 1949 in civil engineering) is retired and after 75 years in Iowa has moved to Green Valley, Ariz.

1950s

James H. Schiltz (BS 1951 in civil engineering) is retired and living in Cedar Rapids, Iowa.

Colonel Alvin G. Rowe (BS 1956 in civil engineering) is a senior consultant with Surety and Construction Consultants, Marietta, Ga.

Donald B. Boldt (BS 1957 in chemical engineering) retired as assistant dean for graduate programs at the School of Business, East Carolina University, Greenville, N.C. He continues to teach one class a semester, consult, and serve on several boards.

Emmett M. Laursen (PhD 1958 in mechanics and hydraulics) was named an honorary member in the American Society of Civil Engineers.

Richard A. Wilford (BS 1958 in civil engineering) is retired and living in Bradenton, Fla.

Charles J. Celsi (MS 1959 in electrical engineering) is retired and living in Des Moines, Iowa.

H. William Lichtenberger, (BS 1959 in chemical engineering) retired as chief executive officer of Praxair, Inc., in March 2000. He remained chairman of Praxair until his retirement in November.

Richard E. Morningstar (BS 1959 in mechanical engineering) is retired and living in Cedar Rapids, Iowa.

James L. Phinney (BS 1959 in civil engineering) received a life membership in the Iowa Section of the American Society for Civil Engineers. He retired in 1999 as area maintenance engineer in Cedar Rapids, Iowa, for the Iowa Department of Transportation after 40 years of service.

Ben C. Yen (MS 1959, PhD 1965 in mechanics and hydraulics) is professor of civil engineering at the University of Illinois, Urbana-Champaign, Ill.

1960s

James A. Chisman (MS 1960, PhD 1963 in industrial engineering) was presented with the Distinguished Engineering Alumni of the Year Award by Akron University, Akron, Ohio, in July 2000. Chisman graduated with a BS degree from

Akron University in 1958. The award honors alumni for their achievements in engineering and significant contributions in public service. Dr. Chisman is emeritus professor of industrial engineering at Clemson University, where he was head of three different programs.

Thomas R. Hanson (BS 1960 in mechanical engineering) was named chair of the College of Engineering Development Council at its October meeting. Hanson has served on College of Engineering fund-raising committees for a total of seven years. Hanson also will serve on The University of Iowa National Campaign Steering Committee.

Allan L. Poole (BS 1961 in civil engineering) is director of public utilities for the City of Naperville, Ill. The Chicago Metropolitan Chapter of the American Public Works Association honored him with a Top Ten Public Works Leader of the Year 2000 Award.

Tom F. Stouten (BS 1961 in civil engineering) is retired and living in East Northport, N.Y.

Jin Wu (MS 1961, PhD 1964 in mechanics and hydraulics) received The University of Iowa Alumni Association's Distinguished Alumni Award at the All-Alumni Luncheon, on June 10, 2000. Dr. Wu, an eminent engineer and internationally recognized educator, is president of National Cheng Kung University in the Republic of China, where he implemented significant reform as the country's former Minister of Education. In 1980, Dr. Wu was appointed the University of Delaware's H. Fletcher Brown Professor of Marine Studies and Civil Engineering. He is a member of the National Academy of Engineering.

Dan C. Cronin (BS 1962 in chemical engineering) is retired and living in Moulton, Iowa.

Donald A. Gurnett (BS 1962 in electrical engineering), University of Iowa professor of physics, and his colleagues analyzed data collected from the first half of the European Cluster II mission launched July 16, 2000. The objective of the mission was to study small-scale plasma structures in Earth's magnetosphere, and was the only U.S. experiment aboard the Cluster II.

Have a Favorite Story about MECCA Week?

Memories of MECCA Week—discovering clues of where the MECCA stone is hidden, attending the "smoker," celebrating St. Patrick as the patron saint of engineering—seem to be entrenched in many College of Engineering alumni memories.

If you have memories of clues used for the MECCA stone hunt, let us know. We want to give them to next year's student organizers of the week. And, if you have a MECCA Week memory you are particularly fond of, share it with us for future issues of Iowa Engineer and alumni events.

To submit your memory, write Iowa Engineer at MECCA Memory, 3100 Seamans Center for the Engineering Arts and Sciences, Iowa City, IA 52242-1527. Or E-mail us at iowa-engineer@uiowa.edu and put MECCA Memory in your subject line.

Keep us up to date



E-mail your class notes
iowa-engineer@uiowa.edu



Mail your class notes
The University of Iowa
College of Engineering
3100 Seamans Center
for the Engineering Arts
and Sciences
Iowa City, Iowa
52242-1527



Call us
with your class notes
319-335-5764



Fax your class notes
319-335-6086

Ravi M. Nayyar (MS 1962 in industrial engineering and management) is managing director with The Jay Engineering Works, Ltd., New Delhi, India. The company manufactures electric fans, sewing machines, and fuel injection equipment.

Terry N. Fleener (BS 1963 in mechanical engineering) retired from Ball Aerospace, Golden, Colo., as director of business development. He is now pursuing a lifelong ambition to get the sport of rugby more recognition in the U.S.

Hirschel A. Katz (BS 1963 in chemical engineering) retired after 35 years with Penford Products Company, Cedar Rapids, Iowa, and is now living in Henderson, Nev.

Richard H. Stanley (MS 1963 in sanitary engineering), chair of the Stanley Group, Muscatine Iowa, received the Citizen Diplomacy of the National Council for International Visitors Award in February, 2000. The award honors an individual or institution in the U.S. or abroad who, motivated by a deep understanding of world issues and a commitment to the exchange of persons and ideas, has achieved a recognized standard of excellence in furthering the cause of international and mutual understanding.

Elliot N. Abrons (BS 1965 in electrical engineering) is senior engineer with United Defense Limited Partnership, Fridley, Minn.

D. Tice Powell (BS 1965 in chemical engineering) retired and built two waterfront properties. He and his wife, Joyce, are enjoying boating activities in Stuart, Fla.

Jonathan B. Hinwood (PhD 1966 in mechanics and hydraulics) is associate professor of mechanical engineering at Monash University, Clayton, Melbourne, Australia, which just completed a major expansion of its offshore engineering laboratories, including extension of a four meter deep wave-current flume.

Chandrakant A. Patel (MS 1966 in civil engineering) is retired and living in Fargo, N. Dak.

Dr. David R. Heltne (BS 1967, MS 1969, PhD 1979 in chemical engineering) is an engineering advisor with Equilon Enterprises, West, Hollow Technology Center, Houston, Tex.

L.D. McMullen (BS 1968 in civil engineering, MS 1972 PhD 1975 in environmental engineering), CEO of Des Moines Water Works, Des Moines Iowa, was appointed by Iowa Governor Tom Vilsack, to a drought advisory council that monitored weather conditions in the year 2000 and recommended actions the state should take to ease the impact of adverse growing conditions on farmers and rural communities. He was elected second vice president of the Iowa Association for Municipal Utilities. He also is president of the UI Alumni Association Board of Directors.

Michael N. Tyler (BS 1968 in mechanical engineering) retired as head of the Fuze Development Branch at the Naval Air Warfare Center, China Lake, Calif.

1970s

Juan Carlos Padilla Aguilar (MS 1971 in industrial engineering) was named Latin America region manager for Hewitt Associates, Lincolnshire, Ill., a leading consulting firm in human resource solutions.

Gary F. Seamans (BS 1971 in electrical engineering) is part of a five-member team that will lead The University of Iowa's comprehensive campaign, now in its initial planning phase. All five steering committee volunteers are members of the UI Foundation Board of Directors.

Dhiraj K. Pradhan (PhD 1972 in electrical and computer engineering) is professor of electrical and computer engineering, Oregon State University, Corvallis, Ore. He is a fellow of the Association for Computing Machinery (ACM) and the Institute of Electrical and Electronic Engineers (IEEE).

Jerome J. Gehl (BS 1973 in mechanical engineering) is medical director of the St. Vincent Breast Center, Little Rock, Ark.

Ken-Ichi Hirayama (PhD, 1974 in mechanics and hydraulics) is dean of the College of Engineering at Iwate University, Morioka, Japan.

Joel A. Stevens (BS 1974 in mechanical engineering) is a systems engineer with IBM. He is part of a team based at Lyndon B. Johnson Space Center - NASA, Nassau Bay, Tex., that will deploy a new filmless x-ray solution to U.S. Army hospitals in the Southwest.

Robert A. Davis (MS 1978 in environmental engineering) is director of conveyance, treatment and engineering sewers with the Little Blue Valley Sewer District in Independence, Mo.

Judy A. Freitag (MS 1978 in environmental engineering) is general manager, environmental services with Commonwealth Edison, Chicago, Ill.

Hiroyuki Haniu (MS 1979, PhD 1983 in mechanical engineering) is professor of mechanical engineering at Kitami Institute of Technology, Kitami City, Japan.

John L. Vadnal (MS 1979, PhD 1984 in mechanics and hydraulics) is professor of mathematics and science at Trinity Baptist College, Jacksonville, Fla.

1980s

Edward Yu-Hsien Lin (MS 1980 in industrial and management engineering, PhD 1984 in industrial engineering) is dean of the College of Management at National Taipei University of Technology, Taiwan.

Susan Ruth Marshall Mims (BS 1980 in biomedical engineering, MS 1982 in industrial and management engineering) is an investment consultant with Heartland Investment Associates, Iowa City, Iowa.

Pearl L. Cheng (BS 1981 in biomedical engineering) received a one-year appointment to the Cupertino, Calif., Union School District Board of Education.

Sastry Munukutla (PhD 1981 in mechanics and hydraulics) was elected a fellow in the American Society of Mechanical Engineers. Munukutla, a professor at Tennessee Technological University Center for Electrical Power, has made significant contributions in power plant performance improvement and monitoring and has applied advanced fluid mechanic techniques in innovative ways to solve power industry problems. He recently developed a real-time heat rate monitoring method for coal-fired power plants.

The Fall 1999 University of Iowa College of Engineering commencement speech delivered by **Barbara J. Sines (BS 1981 in industrial engineering)** won a Silver Quill

Award for speechwriting from the International Association of Business Communicators.

Rachel A. McQuillen (BS 1982 in civil engineering, MS 1984 in civil and environmental engineering) was elected to serve a second term in 2001 as national vice president of the Society of Women Engineers. She is a transportation engineer with Stanley Consultants, Inc., Salt Lake City, Utah.

Ala A. Yousef Al Bakri (BS 1983 in civil engineering, MS 1988, PhD 1990 in civil and environmental engineering) is an advisor to the governments of Saudi Arabia, United Arab Emirates, and Jordan in transportation engineering and policy. He is also an associate professor of traffic and environmental engineering.

Caroline Van Ingen-Dunn (BS 1983 in biomedical engineering) is program manager in human systems technology with Simula, Inc., Phoenix, Ariz. A recent project was conducting a train crash test in Pueblo, Colorado. She specialized in the occupant protection part of the test by staging different seats and dummies in the train to see how effective the seats are protecting the occupants in a crash.

Steven M. Blair (BS 1984 in electrical engineering) was named by Rockwell Collins, Cedar Rapids, Iowa, as one of 50 Engineers of the Year. He was honored as the chief architect for the ARC-120 family of radios.

Kent C. Turner (BS 1984 in civil engineering) is a principal structural engineer in the Structural Department of the Government/Commercial Group with Stanley Consultants, Inc., Muscatine, Iowa.

Lazarus A. Angbazo (MS 1985 in industrial engineering) is vice president of Chase Manhattan Bank in N.Y.

Ann Rosenthal (BS 1985 in mechanical engineering), her husband Eric and their five children were featured on a segment of CBS's "The Early Show." Eric, a stay-at-home dad, was the focus of the segment, which was part of a series on people changing careers. Ann is senior engineer at The University of Iowa operations and maintenance department and a member of the Cedar Rapids, Iowa, school board.

Sungyul Yoo (PhD 1986 in mechanical engineering) is president and owner of Soft-Tech International, Inc. in Remond, Wash.

Gregory G. Wilber (MS 1986 in civil engineering, PhD 1991 in environmental engineering) was the 2000 Chi Epsilon Central District winner of the Excellence in Teaching Award. Wilber is associate professor of civil engineering at Oklahoma State University, Stillwater, Okla.

Anthony S. Hartzler (BS 1987 in electrical engineering) is facility electrical engineer with Rockwell Collins, Cedar Rapids, Iowa.

Joseph F. Longo (BS 1987, MS 1990, PhD 1986 in mechanical engineering) is an assistant research engineer with the Iowa Institute of Hydraulic Research. His efforts focus on both basic and applied aspects of unsteady, turbulent, free-surface flows.

Joel A. Walter (BS 1987, MS 1989, PhD 1997 in mechanical engineering) is employed by Sverdrup Technology, Inc. He is project manager for the design and construction of a full-scale aero-acoustic wind tunnel for Chrysler Corporation.

Amy Gants Brucker (BS 1988, MS 1990 in biomedical engineering) is program associate in the College of Public Health at The University of Iowa.

Paul J. Matheny (BS 1988 in electrical engineering) is an IT analyst with Principal Financial Group, Urbandale, Iowa.

Arya V. Pathria (MS 1988 in electrical engineering) is president of Laughaway.com, an organization that is dedicated to providing maximum knowledge, health, and happiness for the maximum number of people for a maximum time.

Carl K. Walker (BS 1988 in electrical engineering) is design engineer with Taytronics, Maple Grove, Minn.

Shankar G. Hemmady (MS 1989 in electrical and computer engineering) is president and CEO of PharmQuest Corporation, San Jose, Calif., a venture-funded internet-based company serving the biotech and pharmaceutical industry.

Jacqueline M. Krage (BS 1989 in industrial engineering) was named manager, finance, for the Great Lakes Region of the United States Postal Service, in December 2000. She is responsible for managing an annual budget of \$5.3 billion for a territory covering most of Illinois, Indiana and Michigan.

Brad J. Levi (BS 1989 in chemical engineering) is economics and planning coordinator with Marathon Ashland Petroleum, Robinson, Ill.

1990s

Beom-Soo Hyun (PhD 1990 in mechanical engineering) is a professor in the department of naval architecture at Korea Maritime University. He co-founded the Korean Society for Marine Environmental Engineering.

Choong Han Chu (BS 1991 in mechanical engineering) has been assigned as main project manager for ABB Alstom Power's 480 MW gas turbine combined-cycle power station at Pelican Point, Adelaide, Australia. The assignment will last two years and will involve moving from the Gas Turbine Segment headquarters in Baden, Switzerland, to Adelaide, where the plant is being built.

Gary L. Walsh (BS 1991 in industrial engineering) is an advanced engineering analyst with Deere & Company, Horicon, Wis.

Linda A. Narigon (BS 1992 in civil engineering) and **Richard P. Herrick (BS 1996 in civil engineering)** are bridge engineers for the Department of Transportation, Water Resources-Bridge Design Area, Ames, Iowa.

Jeanette A. Thielen (BS 1992 in biomedical engineering) is director of biomedical engineering for the Veteran's Administration Puget Sound Health Care System's two hospitals in Seattle and Tacoma, Wash.

Ranko M. Vujosevic (PhD 1992 in industrial engineering) is founder and president of Optimal Electronics Corporation, Coralville, Iowa. The company developed software to efficiently produce printed circuit boards for Rockwell Collins, Cedar Rapids, Iowa, and Taiwan-based Support Service Engineering, Inc.

Ekran Bayraktar (PhD 1993 in industrial engineering) is assistant dean and a faculty member in the Department of Economics and Business Administration at Beykent University, Istanbul, Turkey.

Chang-Xue (Jack) Feng (MS 1993, PhD 1995 in industrial engineering) is an associate professor in the Department of Industrial and Manufacturing Engineering at Bradley University, Peoria, Ill.

Paul L. Schultz (BS 1993 in electrical engineering) is a supplier quality assurance engineer for a Panasonic division in Peachtree City, Ga., that supplies car audio products to major automobile manufacturers.

Subbiah Sundaram (MS 1993 in electrical and computer engineering) is a product manager with Veritas Software, Mountainview, Calif.

John P. Boehmer (MS 1994 in civil and environmental engineering) is employed by the City Engineering Department, Des Moines, Iowa. A dedicated alumnus, he joined the CE undergraduate field trip to St. Louis in May 2000. **Tom Dumbaugh (MS 1992 in environmental engineering)** and he race cars.

Doug Cook (BS 1994 in civil engineering) is project manager and engineer with Counsilman Hunsaker and Associates, St. Louis, Mo. The company specializes in the design of swimming pools. Currently CHA is working with three Big Ten schools, including the new pool at The University of Iowa Hawkeye Athletic/Recreation Facilities Complex.

M.C. Jothishankar (PhD 1994 in industrial engineering) is senior industrial engineer with Rockwell Collins, Cedar Rapids, Iowa.

Hwa G. Liang (MS 1994 in electrical and computer engineering) is test/verification engineer with Norrel Networks, Alpharetta, Ga.

Disa L. Wahlstrand (MS 1994 in civil and environmental engineering) is a civil engineer in the municipal section with Ayres Associates, Eau Claire, Wis. She works with applied hydraulics and water and wastewater environmental projects. She recently passed her Professional Engineer exam.

Upendra Belhe (PhD in 1995 in industrial engineering) is director of projects at TranSys Technologies Corporation, Cincinnati, Ohio.

Anoop K. Salver (MS 1995 in industrial engineering) is a senior consultant with KPMG Consulting, Inc., Dallas, Tex.

Jennifer L. Simons (MS 1995 in civil and environmental engineering) is an environmental engineer with the Iowa Department of Natural Resources. At an Environmental and Water Resources Conference, Neil Kuehl, president of Kuehl and Payar, cited her as a major contributor to statewide work on water quality and water supply.

Sarah A. Sievers Smyth (BS 1995 in industrial engineering) is a consultant with Intellex Consulting Services. She telecommutes from her home in Evanston, Ill. to Baltimore, Md. Her focus is on analysis, design and programming work within the software package SAP.

Deborah I. Bauer (MS 1996 in civil and environmental engineering) is a civil engineer with Wade-Trim, Detroit, Mich. She successfully completed the Principles and Practice of Professional Engineering exam.

James D. Bovenmyer (BS 1996 in mechanical engineering) is working on a master's degree in mechanical engineering at the University of Wisconsin-Madison. Prior to his return to school, he was employed as a design engineer by Tricad, Inc., Des Plaines, Ill., and GE Medical Systems, Waukesha, Wis.

Amy Henley Bryant (BS 1996 in civil engineering) is an environmental engineer with Terracon, Des Moines, Iowa. She does groundwater contamination site investigations and some remediation design.

Lawrence W. Bryant (BS 1996 in civil engineering) recently joined the wastewater section of the Iowa Department of Natural Resources, Des Moines, Iowa.

Joel A. Conrad (MS 1996 in electrical and computer engineering) was named by Rockwell Collins as one of 50 Engineers of the Year. He was recognized for his work as lead engineer for the DU-9801, a key part of the Boeing large format display system.

R. Brady Fuller (MS 1996 in civil and environmental engineering and hydraulics) is a process engineer and construction manager with CH2M Hill. He is working on a \$50M expansion project at the Rock Creek Advanced Wastewater Treatment Facility, Hillsboro, Ore.

Ronald Knoche (BS 1996 in civil engineering) was named Outstanding Associate Member at the September 15, 2000, annual meeting of the Iowa Section of the American Society of Civil Engineers. The award recognizes the professional contributions of younger members of the society. Knoche is an engineering intern with the City of Iowa City.

Fang-Biao Lin (PhD 1996 in civil and environmental engineering) is manager of cooling systems at Tesma International, Inc. Toronto, Ontario, Canada.

Andrew E. Whelan (PhD 1996 in civil and environmental engineering) is the Asia Technical Leader for Tower Automotive Technical Center in Yokohama, Japan.

Brian D. Barkdoll (PhD 1997 in civil and environmental engineering), assistant professor of civil engineering at the University of Mississippi, won the 1999-2000 Chi Epsilon Excellence in Teaching Award for the Southwest District.

Jennifer D. Studt (BS 1997 in biomedical engineering) is a field clinical engineer with St. Jude Medical, Sylmar, Calif.

Shawn P. Cullen (BS 1998 in chemical engineering) is a process engineer with Equistar Chemicals, LP, Morris, Ill.

Jennifer M. McMahon (BS 1998 in civil engineering) is a structural engineer at Shive-Hattery, Iowa City, Iowa, and is pitching coach for The University of Iowa women's softball team.

Veera P. Rajendran (PhD 1998 in mechanical engineering) is senior research engineer with GE Corporate Research and Development, Schenectady, N.Y. He is working on heat transfer and aerodynamics projects related to gas turbines.

Franz C. Alvarez (BS 1999 in mechanical engineering) is mechanical engineer with Shive-Hattery, Inc., Cedar Rapids, Iowa.

Daniel J. Hanson (BS 1999 in electrical engineering) has been admitted to practice before the United States Patent and Trademark Office. He is an associate with the law firm of Fish & Richardson, Minneapolis, Minn.

Jeremy S. Harrod (BS 1999 in industrial engineering) is a sales engineer with Square D, Atlanta, Ga.

Matthew D. Miller (BS 1999 in civil engineering) is a structural engineer with Howard F. Stup and Associates, Ventura, Calif. The firm specializes in the forensic investigations of buildings. Investigations include field and office research to determine if design or construction of a building meets, exceeds, or falls short of building code requirements.

Sanjay Singhvi (PhD 1999 in civil and environmental engineering), founder of CompuTerra is vice president of Entrepreneurial Learning Systems (ELS), an internet-based business that focuses on providing education for entrepreneurs at all stages of development.

Megan E. Stevens (BS 1999 in electrical engineering) is a manufacturing engineer with Corning, Inc., Wilmington, N.C.

Tzu-Liang "Bill" Tseng (PhD 1999 in industrial engineering) is an assistant professor in the Department of Industrial Technology, Western Kentucky University.

2000s

Jie Cui (PhD 2000 in mechanical engineering) is a postdoctoral research associate at the National Center for Supercomputing Applications at the University of Illinois, Urbana-Champaign, Ill.

Michael D. Farrell, Jr. (BS 2000 in industrial engineering) is software engineer with Inventa, a systems integration firm specializing in B2B eCommerce systems and Enterprise Application Integration (EAI) located in Oakbrook Terrace, Ill. Before joining Inventa, Farrell spent the summer in Ireland doing a post-grad summer school program in Irish Studies at The National University of Ireland.

Stacy Schofield (BS 2000 in chemical engineering) is an engineer with Underwriters Laboratories, Northbrook, Ill.

In Memoriam

Paul B. Marner (BE 1924 in industrial engineering) of Splendora, Tex., December 15, 1999.

Carlyle D. Read (BS 1925 in engineering, MS 1926 in chemical engineering) of Austin, Tex., November 1, 2000.

William L. Robinson, Jr. (BS 1928 in engineering) of Hampton, Iowa, August 16, 2000.

M. Jerome Reid (BS 1928, MS 1929 in chemical engineering) of Rochester, NY, June 14, 2000.

Wilbur L. Cassiday (BS 1930 in chemical engineering) of Alton, Ill., February 17, 2000.

Basil Deegan (BS 1931 in mechanical engineering) of Spencer, Iowa, December 19, 2000.

Cecil C. Fawcett (BS 1931 in mechanical engineering), of Palm Harbor, Fla., January 13, 2000.

Ernest Kosek (BS 1931 in industrial engineering), of Cedar Rapids, Iowa, August 31, 1999.

Cecil H. Morris (BS 1932 in mechanical engineering), of Milwaukee, Wis., February 14, 2000.

J. Rolland Lyons (BS 1933 in civil engineering) of Laguna Beach, Calif., October 10, 2000.

Roland A. Whealy (MS 1933 in chemical engineering), of Fort Myers, Fla., August 29, 1999.

Jaro L. Soucek (BS 1934 in mechanical engineering) of Hilliard, Ohio, December 8, 1999.

John B. Wilson (BS 1934 in civil engineering) of Algona, Iowa, November 4, 1999.

William C. Sedlacek (BS 1935 in electrical engineering) of Los Altos, Calif., July 20, 2000.

Raymond E. Zink (BS 1936, MS 1939 in civil engineering) of Ballwin, Mo., March 30, 2000.

Fay D. Bickel (BS 1937 in mechanical engineering) of Cedar Rapids, Iowa, January 11, 2001.

Maj. Gen. K. D. Nichols (PhD 1937 in mechanics and hydraulics), of North Bethesda, Md., February 21, 2000.

Roland F. Krebill (BS 1938 in civil engineering) of Keokuk, Iowa, October 26, 2000.

Lester A. Sanger (BS 1938 in civil engineering) of Lincoln, Neb., October 7, 2000.

Col. Frank A. Swatta (BS 1938 in civil engineering) of Annapolis, Md., September 11, 2000.

W. Burke Grandjean (BS 1939 in chemical engineering) of Baton Rouge, La., August 12, 1999.

John S. Kehrer (BS 1939 in mechanical engineering) of Cedar Rapids, Iowa, January 1, 2000.

Royal E. Rostenbach (PhD 1939 in chemical engineering) of Bethesda, Md., December 1999.

Joseph A. Sweeney (BS 1939 in chemical engineering) of Catonsville, Md., January 25, 2001.

F. Fritz Stotts (BS 1940 in civil engineering) of Chula Vista, Calif., December 12, 2000.

William V. Bell (BS 1942 in civil engineering) of Indianapolis, Ind., August 14, 2000.

Robert A. Edberg (BS 1942 in electrical engineering) of Iowa City, Iowa, December 12, 2000.

Orville W. McIntosh (BS 1942 in mechanical engineering) of Newbury, N.H., November 3, 2000.

Roger M. Barnett (BS 1943 in mechanical engineering) of Glendora, Calif., October 21, 2000.

Lawrence W. Kesting (BS 1943 in mechanical engineering) of Owens Cross Roads, Ala., November 6, 2000.

Howard W. Barnes (BS 1944 in electrical engineering) of Pine Bluff, Ark., September 18, 1999.

Gerald B. Cox (BS 1944 in civil engineering) of Newton, Iowa, October 28, 2000.

Dick Oswin (BS 1944 in civil engineering) of Mount Shasta, Calif., June 15, 2000.

Clair E. Thomas (BS 1944 in mechanical engineering) of Milton, Ky., December 15, 2000.

Richard S. Padgham (BS 1944 in mechanical engineering) of Fort Worth, Tex., June 28, 2000.

Lester C. Brenneman (BS 1947 in electrical engineering) of Cedar Falls, Iowa, August 1996.

John K. Freund (BS 1947 in electrical engineering) of Davenport, Iowa, October 16, 2000.

William M. Sangster (BS 1947 in civil engineering and MS 1948, PhD 1964 in mechanics and hydraulics) of Smyrna, Ga., August 22, 2000.

Maj. Gen. Kenneth T. Sawyer (MS 1948 in civil engineering) of San Antonio, Tex., September 28, 2000.

William F. Schlenk (BS 1947, MS 1948 in civil engineering) of Richmond, Va., March 24, 2000.

William A. Giese (BS 1949 in electrical engineering) of Dubuque, Iowa, February 20, 2000.

Cecil L. Goodman (BS 1949 in electrical engineering) of Cedar Rapids, Iowa, August 24, 1999.

Col. Dallas L. Knoll, Jr. (MS 1949 in industrial engineering) of Aurora Colo., February 1991.

Col. W.V., McGuinness, Jr. (MS 1949 in civil engineering) of Avon, Conn., July 3, 1999.

Bingham T. Staley (BS 1949 in civil engineering) of Rock Island, Ill., January 3, 2000.

Richard E. Tanner (BS 1949 in mechanical engineering) of Marion, Iowa, December 10, 2000.

Richard H. Wolters (BS 1949 in civil engineering) of Sarasota, Fla., October 5, 2000.

John E. Atkinson (BS 1950 in electrical engineering) of Branson, Mo., July 3, 2000.

Edwin M. Bartlett (BS 1950 in chemical engineering) of Muscatine Iowa, December 20, 2000.

Robert R. Palik (BS 1949, MS 1950 in mechanical engineering) of Richmond, Va., September 6, 2000.

C. E. "Pete" Peterson (BS 1950 in mechanical engineering) of Iowa City, Iowa, November 27, 1999.

Paul A. Zimmerman (BS 1950 in civil engineering and MS 1964 in mechanical engineering) of Amana, Iowa, December 19, 1999.

James A. Ruth (MS 1950 in civil engineering) of Richardson, Tex., January 7, 1976.

Bill Fannon (MS 1951 in mechanics and hydraulics), of San Diego, Calif., October 26, 1999.

Gale B. Hansen (BS 1953 in mechanical engineering) of New York, N.Y., July 23, 2000.

Lowell R. Beach (BS 1954 in civil engineering) of Bettendorf, Iowa, July 10, 2000.

John D. Kilby (BS 1954 in civil engineering) of Dubuque, Iowa, August 13, 2000.

Joseph A. Marshek, Jr. (BS 1954 in chemical engineering) of Muscatine, Iowa, August 5, 2000.

Gayland C. Pohren (BS 1954 in electrical engineering) of St. Paul, Minn., August 15, 1999.

Eugene W. Nadig (BS 1956 in chemical engineering) of Long Beach, Calif., August 21, 1999.

Gerald B. Pratt (BS 1957 in electrical engineering) of Worthington, Ohio, December 31, 1999.

Ronald I. Christensen (BS 1958 in chemical engineering) of Georgetown, Tex., October 5, 2000.

Lawrence G. Focht (BS 1958 in chemical engineering) of Akron, Ohio, September 2, 1999.

James P. Young (BS 1959 in mechanical engineering) of Albuquerque, N.M., June 24, 2000.

Charles J. Rocca (BS 1960 in electrical engineering) of Rochester, Minn., February 9, 2000.

Wayne H. Graves (PhD 1961 in electrical engineering) of Minnetonka, Minn., November 17, 1999.

Catherine M. Robinder (MS 1961 in mechanics and hydraulics) of Rock Island, Ill., August 27, 2000.

James B. Raymon (BS 1963 in chemical engineering) of Sunrise Beach, Mo., October 17, 1999.

Elmer H. Breckenfelder (MS 1965 in industrial engineering) of Muscatine, Iowa, September 6, 2000.

Vladimir Jezdinsky (MS 1965 in mechanics and hydraulics) of Prague, Czech Republic, 1999.

Stephen D. Tiernan (BS 1966 in civil engineering) of Peoria, Ill., January 6, 2000.

Ted C. Huang (PhD 1974 in mechanical engineering) of Sunnyvale, Calif., July 26, 2000.

Ronald P. Fournier (MS 1975 in industrial engineering) of Marietta Ga., October 27, 2000.

David P. Mueller (MS 1987 in civil and environmental engineering) of Davenport, Iowa, July 11, 2000.

Brent D. Weikel (BS 1991 in mechanical engineering) of Muscatine, Iowa, February 4, 2000.

Correction

Robert M. Arthur (PhD 1963 in civil engineering) was mistakenly listed in last issue's In Memoriam. Dr. Arthur is alive and well as CEO of Arthur Technology, Fond du Lac, Wis.

Global Edge

While flipping through the pages of the *Iowa Engineer*, the articles about Prof. Carmichael's research and the article about Greg Kirsch caught my attention. Prof. Charmichael's quotation about him telling his students to learn Japanese or international relations being important for their careers really rang true for me. Additionally, Greg Kirsch's quote about the need for effective oral and written communication added to that.

I work as a supplier quality assurance engineer for a Panasonic division in Peachtree City, Georgia, that supplies car audio products to major automobile manufacturers. The BA in Asian Languages (Japanese) I completed at Iowa has always been as important as my BS in electrical engineering because they complement each other so well. Speaking, reading, and writing Japanese moved my resume to the top of the stack when applying for the job I have now; Panasonic is, after all, a Japanese-owned company.

I have had great opportunities to travel to Japan and Southeast Asia for business and training and gain the recognition of my peers and company management. Knowing Japanese has opened many doors that, I believe, are closed to other people. When going to Japan, I've assisted many excellent engineers whose ideas might otherwise lose substance through poor interpretation. Even though many Japanese people speak English well, I have always found there is something to be gained by speaking to them in their native language. Efficient and correct communication is as important to an engineer as any part of his or her study.

Paul Schultz
BS 1993 in electrical engineering

Biomedical Engineering

Krishnan B. Chandran, professor and departmental executive officer of biomedical engineering, was appointed Lowell G. Battershell Chair in Biomedical Engineering in July 2000. The appointment recognizes the important contributions Dr. Chandran has made to graduate and undergraduate education, as well as his international reputation in the research field of cardiovascular biomechanics.

The UI College of Engineering received a three-year grant from the Whitaker Foundation to establish an industrial internship program for biomedical engineering students. The internship program is directed by Joseph Reinhardt, assistant professor of biomedical engineering, in cooperation with Phil Jordan, director of internships and co-ops.

Chemical and Biochemical Engineering

Corey Kriegermeier, a senior from Cedar Rapids, Iowa, won the Safety and Chemical Engineering Education (SACHE) Award for the 1999-2000 academic year. Only two of these awards are given in the U.S. each year. This is the second time in the last five years that a UI student has won this essay contest.

Laura Itle, a senior from Cedarburg, Wis., won the American Institute of Chemical Engineers (AIChE) Scholarship Award for the 2000-2001 academic year. The scholarship is based on academic achievement and participation in AIChE activities. Only 15 of these awards are given in the U.S. each year. This marks the seventh time in the last nine years that a UI student has won this prestigious award.

The University of Iowa was recognized as an American Institute of Chemical Engineers (AIChE) Outstanding Student Chapter for 2001. This is the eighth straight year that the UI has received this honor.

Gregory Carmichael, professor, received a Distinguished Guest Professor Award from the Japanese Ministry of Education and Culture. The award is given annually to ten international researchers to enable them to promote scientific exchange and collaborative studies at designated centers of excellence.

Vicki Grassian, associate professor in the department of chemistry, and Gregory Carmichael, professor of chemical and biochemical engineering, received a National Science Foundation (NSF) award to provide Enhanced Research Opportunities for undergraduate students. The UI award was one of ten new awards funded through the NSF Engineering Centers Division.

Civil and Environmental Engineering

A. Jacob Odgaard, professor and associate dean for graduate studies and research, received the 2001 Hydraulic Structures Medal from the Environmental Water Resources Institute at the May World Water and Environmental Resources Congress in Orlando, Fla. He is recognized for his innovations in experimental and engineering design, and his innovative and creative design of structures for river restoration and control. In addition, he was honored for contributions to the profession as editor of the *Journal of Hydraulic Engineering* from 1994 to 1998 and associate editor from 1989 to 1994. Odgaard and **Larry Weber**, associate professor, received \$2.15 million in new funding from Public Utility District No. 2 of Grant County, Wash., for a variety of projects aimed at modifying dams in an effort to save the salmon.

Quac H.G. Mai, a senior from Des Moines, Iowa, was awarded a Samuel Fletcher Tapman Scholarship from the American Society of Civil Engineers.

Wayne L. Paulson, professor emeritus, civil and environmental engineering, has been awarded the George Warren Fuller Award. The Fuller Award is one of American Water Works Association's (AWWA) most prestigious honors. Paulson was nominated in recognition of his life-long contributions to the water industry as a mentor, educator, and researcher. He will receive the award at the National American Water Works Association Conference, Washington, D.C., in July 2001.

Kathleen Johnson, a senior from Edwardsville, Ill., was awarded the 2000 Chi Epsilon North Central District Scholarship.

Hosin "David" Lee, associate professor was guest professor at the Technical University of Denmark in June and July.

Forrest M. Holly Jr., professor, was selected by the American Society of Civil Engineers Water Resources Engineering Division as recipient of the 2000 Hunter Rouse Hydraulic Engineering Award and Lecture. The award presentation and lecture was held in August at the Annual Joint Water Resources Engineering and Planning and Management Conference, Minneapolis, Minn. He also was appointed chair of the editorial task force for hydrology for the World Meteorological Organization's "Guidelines for the Education and Training of Personnel in Meteorology and Operational Hydrology."

Jerald L. Schnoor, professor, was honored with the Hancher-Finkbine Faculty Medallion at the 83rd anniversary Finkbine Dinner in April 2000 in Iowa City, Iowa.

The University of Iowa Center for Health Effects of Environmental Contamination (CHEEC), directed by **Gene Parkin**, professor, hosted an international meeting titled, "Endocrine Disruptors and Pharmaceutically Active Chemicals in Drinking Water," in April 2000 in Chicago, Ill.

Michelle M. Scherer, assistant professor, received a National Science Foundation CAREER Award for "Reactivity of Green Rust Compounds in Natural and Engineered Systems."

The University of Iowa Steel Bridge Team placed third at the regional competition held in February 2000, at the University of North Dakota. This was the fourth year in a row that the UI team qualified for nationals. Student team members were co-chairs **Ben Carhoff** and **Todd Barrett**; and construction team members **Lydia Abarr**, **Jack Burnham**, **Brad Hill**, **James Mitchell**, and **Josh Shippy**.

Peter Vikesland, graduate student from St. Charles, Ill., received the Academic Achievement Award for 2000 at the annual meeting of the American Water Works Association. **Richard Valentine**, professor, received an accompanying award for being the major academic advisor.

Wilfrid A. Nixon, professor, was appointed to a second three-year term as chair of the A3C09 Winter Maintenance Committee on the Transportation Research Board, a branch of the National Research Council, at its January 2001 meeting. Nixon was first appointed chair of the A3C09 Winter Maintenance Committee in February 1998.

Electrical and Computer Engineering

Anna Tauke, a third year student from Dubuque, Iowa, was selected by the National Science Foundation (NSF) as one of 10 undergraduate students to spend Summer 2000 at the European Laboratory for Particle Physics (CERN) located near Geneva, Switzerland. Tauke is simultaneously working toward earning an electrical and computer engineering degree and a physics degree.

Industrial Engineering

John D. Lee, associate professor, served as an expert witness in the first-ever U.S. vehicular homicide trial held in December in Washington, D.C. involving a driver distracted by a cell phone. Lee and **Daniel McGehee**, director of human factors research at the Public Policy Center, were two of fifteen technical experts that participated in an international internet forum sponsored by the National Highway Traffic Safety Administration (NHTSA). The July-August forum provided an opportunity for technical experts and the general public to download research papers, ask questions, share experiences regarding the use of in-vehicle devices and participate in an exchange of views on related technical issues.

Mechanical Engineering

Fredrick Stern, professor, was elected Fellow in the American Society of Mechanical Engineers. Stern was cited as "the international leader in developing computational ship hydrodynamics."

P. Barry Butler, professor and dean of the College of Engineering received a \$23,500 grant from the North Atlantic Treaty Organization (NATO) that may add international expertise to his efforts to design safer airbags for cars and trucks. The goal of the two-year grant is to provide funding for international collaboration in the fields of ignition and combustion of solid-fuel propellants.

K.K. Choi, professor and director of the Center for Computer-Aided Design, was elected an Associate Fellow of the American Institute of Aeronautics and Astronautics "in recognition of his professional standing and successful practice." Choi also was elected Fellow in the American Society of Mechanical Engineers. In addition, he was appointed adjunct faculty in the Department of Mechatronics at the Kwangju Institute of Science and Technology, Kwangju, Korea, through November 2002.

H.S. Udaykumar, assistant professor, received a five-year \$375,000 National Science Foundation CAREER Award for "Interaction of Microscale Solidification Fronts with Embedded Particles."

Ralph I. Stephens, professor, co-authored the second edition of *Metal Fatigue in Engineering* with **Ali Fatemi**, (BS 1979, MS 1980 in civil engineering, PhD 1985 in mechanical engineering) **Robert R. Stephens** (BS 1985 in mechanical engineering) and **Henry O. Fuchs**. The first edition has served as an important textbook and reference for students and practicing engineers for 20 years.

Student Development Center

Nancy Schneider, director of academic development, and **Sue Kelsey**, undergraduate academic advisor, presented "The First Year Seminar: Evolving toward a More Integrated Approach," at the National Conference of the First-Year Experience held in February 2000 in Columbia, S.C.

IIHR-Hydrosience and Engineering

The American Water Works Association named the Hydraulics Laboratory an American Water Landmark. The Hydraulics Laboratory was designated to

receive this award because of the historic and continuing impact of research and education programs conducted by the IIHR on the way water is studied and used locally and around the world.

Cornelia Mutel, program associate at the IIHR was the recipient of an American Association for State and Local History (AASLH) Certificate of Commendation for publishing and promoting Iowa's environmental and scientific history. The award is the most prestigious recognition for achievement in the preservation and interpretation of local, state, and regional history. Award winners were honored at a special banquet in September 2000 at the AASLH/Louisiana Association of Museums' joint annual meeting in New Orleans, La.

Interdisciplinary

Tom Casavant, professor, is a member of a team of UI researchers who received a two-year, \$3.3 million contract from the National Eye Institute (NEI) for their project, "Gene Discovery in the Visual System."

A new three-volume *Handbook of Medical Imaging* published in July was a much-needed addition to the rapidly growing interdisciplinary field of medical imaging. The second book of this series was co-edited by **Milan Sonka**, professor of electrical and computer engineering, **Joseph Reinhardt**, assistant professor of biomedical engineering, **Michael Vannier**, professor of radiology, and Sonka, appear as first authors on three of the book chapters. The book was prepared in a camera-ready form by **Juerg Tschirren**, graduate student in Electrical and Computer Engineering. The entire Handbook project is associated with the International Symposium on Medical Imaging. Sonka is chairing the Image Processing conference of this symposium.

Milan Sonka, professor of electrical and computer engineering, and **Joseph Reinhardt**, assistant professor of biomedical engineering are part of a multi-disciplinary team that received a \$7.1 million National Institutes of Health grant for "Image and model-based analysis of lung disease." This is one of the first awards given as part of National Institute of Health's new Biomedical Engineering Partnership Program.

Alumni Key to Scholarship Impact

I am particularly happy that this issue of *Iowa Engineer* has a feature on student scholarships (pages 14-15). The heart of our work here at The University of Iowa centers on efforts to ensure a welcoming and engaging learning environment for our students, and there is no better example of this commitment than student scholarships.

Scholarships are powerful in many ways. They often make the difference for a student who is deciding which engineering college to attend. They help make college affordable, and they reward academic success. They help us recruit from all communities of students, and they can honor faculty, staff, alumni, friends, and corporate partners. Arguably, there is no greater impact on the college—and its students—than scholarship gifts.

Student recipients of named, endowed scholarships are most grateful for the assistance scholarship awards provide. A scholarship often affirms a student's commitment to succeed in a rigorous academic environment and highlights his or her academic success. For some, a scholarship award may be the reason they can afford to attend the UI College of Engineering.

Many of our alumni benefited from scholarship assistance when they attended the college and can understand the impact such gifts make—especially those of you still paying off student loans. Alumni and friends who have generously provided scholarship gifts can attest to the benefits they derive from helping future engineers. Donors regularly get personal thank-you notes from students who have received an award from their scholarship fund. This kind of personal contact brings scholarships to life.

Over the past two years, it has been my pleasure to work with a number of College of Engineering alumni and friends to create scholarship funds for our students. There is nothing more satisfying than helping these thoughtful contributors arrange such programs to support student learning. Generations of engineering students will receive scholarship assistance because of the generous foresight of our benefactors. In return, individuals who make these gifts are recognized with a scholarship fund named to honor them, a member of their family, or a former faculty member. Their names are recognized and remembered by all of the students who benefit from their loyalty and generosity.

The manner in which the UI Foundation and the College of Engineering invest and award scholarships ensures that these endowments keep on giving, year in and year out. Endowed scholarship funds are permanent resources; the principal is never spent and maintains its value over time through income reinvestment.

Please contact me if you would like additional information on our scholarship program in the College of Engineering. I can be reached by phone at 1-800-648-6973, or by E-mail at kevin-c-collins@uiowa.edu.



KEVIN COLLINS

Three Professors Honored for Contributions to UI College of Engineering

Three University of Iowa professors have received College of Engineering awards for their individual contributions to research, teaching, and service. They are William Eichinger, associate professor of civil and environmental engineering and researcher at IIHR-Hydroscience & Engineering, for teaching; Theodore F. Smith, professor of mechanical engineering, for service; and Vijay K. Goel, professor of biomedical engineering and co-director of the Iowa Spine Research Center, for research.

Eichinger earned his doctorate from the University of California-Davis in 1985 and conducts research in hydrology and fluid mechanics in the environment, atmospheric pollution control, and remediation. He was honored for making significant contributions toward helping students excel in the classroom.

One nominating student said, "Professor Eichinger makes

us think like engineers and think with our common sense about what we're doing."

Smith earned his doctorate from the University of Illinois in 1972. His research interests include radiative properties and heat transfer, optimal control of thermal systems, and thermal sciences and engineering.

The award noted Smith's service contributions, including serving as chair of a multitude of departmental, collegiate and university committees; serving as chair of the College's Computer Committee for six terms, as well as serving on the university's Computer Committee for three years (one as chair); directing the Program for Enhanced Design Experience, a program uniting industry with the classroom in teaching students how to solve real-world problems; contributing to the engineering profession through national and interna-

tional societies and providing critical technical expertise to area industry through consulting; and serving as interim departmental executive officer of the Mechanical Engineering Department.

Goel is a recognized authority on spine biomechanics, with additional research interests in joint replacement, tissue bioengineering and dental biomechanics. Goel received his doctorate in mechanical engineering from the University of New South Wales, Australia, in 1977, and has published more than 130 peer-reviewed articles, 20 book chapters, more than 200 abstracts, authored two books, and edited a conference proceedings. From 1990 to 1995, he served as chair of the UI Department of Biomedical Engineering. He and his students have won many awards, including the Volvo Award three times.



WILLIAM EICHINGER



THEODORE F. SMITH



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